

Remarks

This is responsive to the Office Action mailed February 24, 2010. Applicant respectfully traverses the rejection of all claims and requests reconsideration thereof. In an absence of the requested reconsideration, reasons are set forth below why the case is presently not in condition for appeal.

Section 112(1) Rejection

Claims 1, 3, 5-9, and 21-24 stand rejected as allegedly failing to comply with the written description requirement. Applicant respectfully traverses the rejection and requests reconsideration.

Particularly, the Office believes there is lacking the requisite written description support for the disputed *angularly disposed symmetrically* feature in the context of the following language of claim 1, shown as it was amended in Applicant's Response of November 2, 2009:

the prewritten discs placed around the motor hub with respect to each other so that disposing the alignment axes among the plurality of prewritten discs are angularly disposed ~~angular references axes~~ symmetrically around the motor hub....

The Office's rationale for the rejection is that the disputed feature is allegedly new matter. However, that is reversible error at least because none of the disputed terms were newly introduced in Applicant's most recent amendment. That is, the disputed "symmetrically" was and still is recited in claim 1, "angular" was amended to the disputed "angularly," and "disposing" was amended to the disputed "disposed" as the result of

Applicant amending claim 1 merely to more particularly point out and distinctly claim the subject matter of claim 1.

The Office's rationale for the rejection further asserts that the Applicant allegedly manifested no evidence that it possessed the claimed invention at the time of filing, particularly in regard to the disputed "symmetrically" feature:

The specification and drawings, as originally filed, provide no written description of any alignment axes of the prewritten discs being angularly disposed *symmetrically* around the motor hub.¹

However, that too is reversible error at least because it ignores the fact that the Board found clear support for the disputed "symmetrically" feature in the originally filed specification. Following is the Board's summation of the invention, which in respect to the embodiments that form a disc stack of discs employing alignment marks on them, orients the alignment marks "oppositely" for even numbered discs in the stack (180 degrees apart for two-disc stacks, 90 degrees apart for four-disc stacks, etc.) and "at even intervals" for odd numbered discs in the stack (120 degrees apart for three-disc stacks, 72 degrees apart for five-disc stacks, etc.). The skilled artisan readily understands that both "oppositely" and "at even intervals" plainly means "symmetrically":

The Invention

The disclosed invention is to [sic: to a] method for assembling prewritten discs in a disc stack that minimizes servo pattern runout. Spec. 3:6-7.

When servo information is written onto a disc, three radial lines are made on both the upper and lower surfaces. The middle line is an alignment mark. Spec. 5:11-13.

The assembly process of the disc stack starts by placing a prewritten disc about the spindle motor hub of a disc drive. A detector scans the prewritten disc to locate the alignment mark. The prewritten disc is then rotated and aligned with the assistance of a biasing force that is applied to the outside edge of the disc toward its center. The

¹ Office Action pg. 3.

position of the prewritten disc is then secured to the spindle by a disc clamp. The process continues by placing the next prewritten disc about the spindle and the additional step of balancing the disc stack by applying the biasing force at opposite directions for even numbered disc stack assemblies or at even intervals for odd numbered disc stack assemblies. Spec 6:16 to 7:30.²

The specification passage that the Office refers to clearly discloses that the “opposite directions” or the “even intervals,” in other words the disputed “symmetrical” placing of the discs, refers to both the embodiments employing the alignment marks as well as to the other embodiments not employing the alignment marks:

In one preferred embodiment for a single prewritten disc 108, the entire assembly process is robotically performed. In this preferred embodiment, a robot assembly includes a robotic controller, a robotic arm, an optical detector, a servo system and an assembly tool. The robotic arm picks up the prewritten disc 108 and positions the prewritten disc 108 about the spindle motor hub 107. An optical detector scans the prewritten disc 108 to locate the alignment mark 134. The robotic arm then rotates the prewritten disc 108, using the robotic assembly servo system to monitor the position of the prewritten disc 108, until the alignment mark 134 is aligned with a direction of a biasing force 140, which direction is stored in a memory of the robotic controller.

The biasing force 140 is then applied to the prewritten disc 108 by pressing the assembly tool against an outer diameter of the prewritten disc 108. In turn, an inner diameter of the prewritten disc 108 engages the spindle motor hub 107 at the contact point 138. The position of the prewritten disc 108 is then secured by clamping the prewritten disc 108 to the spindle motor hub 107 by disc clamp 110. Many types of disc clamps are well known in the art and the specifics of clamping the prewritten disc 108 to the spindle motor hub 107 depend on the type of clamp that is used. The installation of the disc clamp 110 completes the formation of the disc stack assembly.

In another preferred embodiment, human workers form the disc stack assembly on an assembly line. In this embodiment, the prewritten disc 108 must have an alignment mark 134 that is discernible to the human eye. A

² BPAI Decision of August 28, 2009 pg. 2 (emphasis added).

first worker places the prewritten disc about the spindle motor hub 107. After the first worker locates the alignment mark 134, he then applies a biasing force 140 at the outside edge of the disc 108 towards a center of the disc 108. A simple tool such as a screwdriver can be used to apply this biasing force 140. While the first worker applies the biasing force 140, a second worker clamps the prewritten disc 108 to the spindle motor hub 107 to complete the formation of the disc stack assembly.

In yet another preferred embodiment, no alignment mark is placed on the prewritten disc at all. After the servo information has been written to the disc, the position of the disc is precisely monitored relative to the biasing forces used during servo write and placed in a carrier for storage. Then, at the time of forming the disc stack assembly, the prewritten disc is taken from the carrier, placed on the spindle motor hub and biased in precisely the same manner in which it was biased during servo write. For this embodiment, the entire operation is precisely controlled by a computer or programmable controller.

In an embodiment of a disc stack assembly having multiple prewritten discs 108, it is desirable to balance the disc stack assembly for rotation about the spindle motor hub 107. For disc stack assemblies with even numbers of discs, this may be accomplished by applying the biasing force for a particular disc in an opposite direction from any disc above and below that particular disc. For disc stack assemblies with odd numbers of discs, the biasing force should be applied to each disc at even angular intervals about a circumference of the discs 108. For example, if there are three discs, the biasing force for any particular disc should be applied to the outer diameter of the particular disc 108 one-hundred-twenty degrees apart from the direction of each of the biasing forces applied to the remaining two discs 108.³

The legal criteria for satisfying the written description requirement is whether Applicant has disclosed the technologic knowledge upon which the rejected claim is based, and demonstrated a possession of the claimed invention at the time of filing.⁴ Contrary to the Office's stated position, there simply is no written description requirement that the criteria

³ Specification pg. 6:16 to 7:30 (emphasis added).

⁴ *Ariad Pharmaceuticals v. Eli Lilly and Co.*, 2008-1248 (Fed. Cir. 2010) *en banc*.

can only be satisfied in terms of the explicitly recited terms in the claim.⁵ The skilled artisan understands, as evidenced by the Board's findings, that the specification plainly discloses Applicant's possession of the disputed *angularly disposed symmetrically* feature in terms of an even-disc stack being aligned in "opposite" directions and an odd-disc stack being aligned in "even intervals," both "opposite" and "even-intervals" plainly and clearly meaning "symmetrically" around the motor as claimed.

Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of claim 1 and the claims depending therefrom. Absent the requested reconsideration and rebuttal evidence, Applicant has herein requested a formal telephone interview to address this unresolved factual issue that presently makes this case not in condition for appeal.

Section 112(2) Rejection

Claims 1, 3, 5-9, and 21-24 stand rejected as allegedly being indefinite. Applicant respectfully traverses the rejection and requests reconsideration.

Particularly, the Office believes the person of ordinary skill would not understand what the disputed *alignment axis* refers to.⁶ The Office effectively alleges that the specification discloses only an alignment mark, not the disputed *alignment axis*:

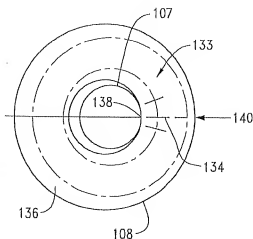
The specification describes a process of locating an alignment mark on a prewritten disc and rotating and aligning the prewritten disc with a biasing force in a direction toward the center of the disc. The specification does not describe the applicant(s) invention in terms of an "alignment axis that is in the same angular direction for all of the plurality of prewritten discs"....⁷

⁵ Office Action pg. 3: "The specification, as originally filed, does not even use the terms of "angularly disposed" or "symmetrically."

⁶ Office Action pg. 4.

⁷ Office Action pg. 4.

Applicant agrees that in some embodiments the discs employ alignment marks 134:



There is apparently no dispute that the specification discloses biasing a plurality of discs in the servowriter with a force 140 directed toward a common radial axis of each disc 108 that includes the respective alignment mark. Hence the servo pattern (depicted by broken circles) on each disc 108 is written at a concentricity offset with respect to the circular disc 108 in the direction of the radial axis that includes the alignment mark 134. The prewritten discs 108 are then removed from the servowriter and placed around the motor hub with the alignment marks 134 being *angularly disposed symmetrically* disposed around the motor hub, as discussed above.

However, it is reversible error for the Office to simply ignore the fact that the specification also discloses embodiments that do not employ alignment marks, as discussed above.⁸ Applicant has explained that it is entitled to broader claim scope than just some of the disclosed embodiments that would be encompassed by use of “alignment mark,” if all the disclosed embodiments can be claimed with the requisite definiteness required by law.

⁸ See note 3, excerpt at specification pg. 7:12-13, “In yet another preferred embodiment, no alignment mark is placed on the prewritten disc at all.” (emphasis added).

The legal criteria for definiteness is whether the skilled artisan understands what is claimed when the claim is read in light of the specification.⁹ The skilled artisan readily understands that an “alignment mark” disposed along a “radial axis” of the disc can meaningfully be defined in terms of an “alignment axis.” For those embodiments not employing the visible alignment mark, the “alignment axis” clearly defines the very same position that would otherwise be occupied by the “alignment mark.” In the context of the claim language, the servo tracks define a concentricity offset in the direction of the alignment axis: *each prewritten disc having servo tracks characterized by a concentricity offset in a direction of an alignment axis*. The skilled artisan having read the specification understands there is exactly one and only one radial axis along which the servo tracks define a concentricity offset, that being the radial axis including the alignment mark. Accordingly, the skilled artisan having read the specification has no difficulty comprehending the meaning of “alignment axis” in view of the description of FIG. 2 and the contextual meaning ascribed by the rest of the claim language of which the disputed term “alignment axis” forms a part.

Applicant has attempted to make it clear that it is amenable to reciting something other than the disputed term “alignment axis” if the Office would only state its preference, so long as the Office’s preference encompasses all the disclosed embodiments like “alignment axis” does. Rather than offer a meaningful suggestion, however, the Office reticently proceeds in a direction that ultimately restricts the claim scope to only those embodiments employing an “alignment mark.” That is reversible error absent a showing that the skilled artisan does not readily understand what “alignment axis” means.

⁹ *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986).

The Office's attempted showing to that end is that the skilled artisan would allegedly think the disputed "alignment axis" could reasonably be in a direction into and out of the page of FIG. 2:

A person of ordinary skill in the art would not understand what *alignment axis* is being referred to. For example, angular directions for the discs can occur into and out of the page (of Figure 2). Therefore, it would be impossible to determine an alignment axis that would be the very same angular direction for all of the discs in a plane into and out of the page (of Figure 2). Accordingly, the claims terms are not sufficiently described in the specification and the meaning of the claims is undeterminable, subject to plural interpretations, and therefore indefinite.¹⁰

The Office's rationale is reversible error because it ignores explicitly recited claim language. As discussed above, Applicant has already shown in the record that claim 1 features the alignment axis as being within the same plane of the disc 108, because the claim explicitly features the servo tracks defining a concentricity offset in the direction of the alignment axis.¹¹ The skilled artisan understands it would be nonsensical to argue that the servo tracks could define a concentricity offset in the direction of a plane into or out of the page in Figure 2.

Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of claim 1 and the claims depending therefrom. Absent the requested reconsideration or rebuttal evidence, Applicant has herein requested a formal telephone interview to address this unresolved factual issue that presently makes this case not in condition for appeal.

¹⁰ Office Action pg. 4.

¹¹ Applicant's Response of 11/2/2009 pg. 6; again, particularly, claim 1 recites in pertinent part *each prewritten disc having servo tracks characterized by a concentricity offset in a direction of an alignment axis...*

Conclusion

This is a complete response to the pending action in this case. Applicant respectfully requests passage of all claims to allowance.

Applicant has also submitted herewith a request for telephone interview if, after having reviewed this Response, the Office determines that any of the claims are not in condition for allowance. The presently requested interview is necessary and appropriate to address the unresolved factual issues discussed herein that presently make this case not in condition for allowance.

The Office is encouraged to contact the undersigned should any question arise concerning this response or anything else concerning this case.

Respectfully submitted,

By: /Mitchell K. McCarthy/

Mitchell K. McCarthy, Registration No. 38,794
McCarthy Law Group
512 Northwest 12th Street
Oklahoma City, Oklahoma 73103
www.mccarthyiplaw.com
1.877.654.6652 or 405.639.3082